

WHAT IS CLAIMED IS:

- Pab E1*
1. A specific binding protein which specifically binds to native canine free or B cell-bound IgE, and which does not bind to IgE when the IgE is bound to a receptor on a mast cell.
2. The specific binding protein of claim 1 wherein the B cell-bound IgE is IgE expressed on the surface of a canine B cell.
- 10 3. A method for treatment or prophylaxis for canine allergy, said method comprising:
and,
providing a specific binding protein of claim 1;
15 administering the provided binding protein to a dog.
- 20 4. The method of claim 3 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and the diluent.
- 25 5. The method of claim 3 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.
- Pab E2*
6. A specific binding protein which specifically binds to an isolated and purified peptide comprising a leucine

Mak E2 w/
positioned two peptide bonds away from a tyrosine-arginine pair.

7. The specific binding protein of claim 6 which
5 specifically binds to peptide comprising the form:
a a (Mak E3
leucine-blank-blank-tyrosine-arginine *(SEQ ID NO:1)* tyrosine-arginine-
blank-blank-leucine *(SEQ ID NO:2)* or, leucine-blank-blank-tyrosine-
arginine-blank-blank-leucine *(SEQ ID NO:3)*, where blank is any amino acid.
a

(Mak E4)
10 8. The specific binding protein of claim 7 wherein at least one blank is an amino acid with an aromatic ring.

9. A specific binding protein of claim 6 which is an antibody.
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10. The specific binding protein of claim 9 which is a monoclonal antibody.

11. An antibody of claim 9 which is raised to an
20 isolated and purified peptide comprising a leucine positioned two peptide bonds away from a tyrosine-arginine pair, and wherein the peptide consists of from 5 to 71 amino acids.

12. A method for treatment or prophylaxis for canine
25 allergy, said method comprising:
providing a specific binding protein in accordance with claim 8; and,
administering the provided binding protein to a dog.

13. The method of claim 12 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and 5 the diluent.

14. The method of claim 12 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

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a } Sub 15
15. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which (SEQ ID NO:4) comprises Thr-Leu-Leu-Glu-Tyr-Arg-Met, or a conservative variant thereof.

15

Sub 15 }
16. The antibody of claim 15 that binds to a defined epitope.

20

Antib }
17. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 16.

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18. A method for treatment or prophylaxis for canine allergy, said method comprising:
providing an antibody in accordance with claim 15;
and,

administering the provided binding protein to a dog.

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19. The method of claim 18 further comprising a step of mixing the provided antibody with a diluent prior to the

administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

5 20. The method of claim 18 further comprising a step of administering a booster dose of the provided antibody, following the administering step.

Sub C3
10 21. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which comprises ~~Gly-Met-Asn-Leu-Thr-Tyr-Arg-Glu-Ser-Lys~~, or a conservative variant thereof.

Sub C17
15 22. The antibody of claim 21 that binds to a defined epitope.

Comb E4
20 23. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 22.

24. A method for treatment or prophylaxis for canine allergy, said method comprising:

 providing an antibody in accordance with claim 21;
 and,

25 administering the provided binding protein to a dog.

25. The method of claim 24 further comprising a step of mixing the provided antibody with a diluent prior to the administering step, and wherein the administering step

comprises administering the mixture of the antibody and the diluent.

26. The method of claim 24 further comprising a step of
5 administering a booster dose of the provided antibody,
following the administering step.

27. A specific binding protein which is raised to a multiply antigenic peptide comprising multiple copies of an
10 isolated and purified peptide which comprises a leucine positioned two peptide bonds away from a tyrosine-arginine pair.

28. The specific binding protein of claim 27 which is
15 raised to a multiply antigenic peptide which comprises multiple copies of the isolated and purified peptide comprising a leucine positioned two peptide bonds away from a tyrosine-arginine pair, and wherein the peptide consists of from 5 to 71 amino acids.

20. 29. The specific binding protein of claim 27 that specifically binds to a defined epitope.

30. A recombinant binding molecule which specifically
25 binds to the defined epitope bound by the binding protein of claim 29.

31. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing a specific binding protein of claim 27;
and,
administering the provided binding protein to a dog.

5 32. The method of claim 31 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and the diluent.

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33. The method of claim 31 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

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34. A specific binding protein which is raised to a recombinant plant virus particle comprising at least one copy of an isolated and purified peptide comprising a leucine positioned two peptide bonds away from a tyrosine-arginine pair.

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35. The specific binding protein of claim 34 which is raised to the recombinant plant virus particle, wherein the particle comprises at least one copy of the isolated and purified peptide comprising a leucine positioned two peptide bonds away from a tyrosine-arginine pair, and wherein the peptide consists of from 5 to 71 amino acids.

36. The specific binding protein of claim 34 that specifically binds to a defined epitope.

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Mark Elio
37. A recombinant binding molecule which specifically binds to the defined epitope bound by the binding protein of claim 36.

5 38. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing a specific binding protein in accordance with claim 34; and

administering the provided binding protein to a dog.

10 39. The method of claim 38 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and 15 the diluent.

40. The method of claim 39 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

20 41. A monoclonal antibody which is 8H.8.

42. The monoclonal antibody of claim 41 that specifically binds to a defined epitope.

25 43. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 41.

44. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing the monoclonal antibody of claim 41 and,
administering the provided monoclonal antibody to a

5 dog.

45. The method of claim 44 further comprising a step of mixing the provided monoclonal antibody with a diluent prior to the administering step, and wherein the administering step 10 comprises administering the mixture of the monoclonal antibody and the diluent.

46. The method of claim 44 further comprising a step of administering a booster dose of the provided monoclonal 15 antibody, following the administering step.

47. A specific binding protein which specifically binds to an isolated and purified peptide comprising cysteine-blank-
proline-histidine-blank-proline-blank-blank-cysteine, where 20 blank is any amino acid. *(SEQ ID NO: 9)*

48. The specific binding protein of claim 47 which is an antibody.

25 49. The specific binding protein of claim 48 which is a monoclonal antibody.

50. An antibody of claim 48 which is raised to an isolated and purified peptide comprising cysteine-blank-

a proline-histidine-blank-proline-blank-blank-cysteine, where
blank is any amino acid.

51. A method for treatment or prophylaxis for canine
5 allergy, said method comprising:

providing a specific binding protein in accordance
with claim 47; and,

administering the provided binding protein to a dog.

10 52. The method of claim 51 further comprising a step of
mixing the provided binding protein with a diluent prior to
the administering step, and wherein the administering step
comprises administering the mixture of the binding protein and
the diluent.

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53. The method of claim 51 further comprising a step of
administering a booster dose of the provided binding protein,
following the administering step.

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54. An antibody which is raised to an isolated and
purified peptide comprising an amino acid sequence which
comprises Cys-Pro-Asn-Pro-His-Ile-Pro-Met-Cys or a
conservative variant thereof.

25 *α INS B2*
Sub C4
INS B3
a
55. The antibody of claim 54 wherein the amino acid
sequence comprises Ser-Val-Thr-Leu-Cys-Pro-Asn-Pro-His-
Ile-Pro-Met-Cys-Gly-Gly-Gly.

30 56. The antibody of claim 54 that binds to a defined
epitope.

57. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 56.

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58. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing an antibody in accordance with claim 54;
and,

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administering the provided binding protein to a dog.

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59. The method of claim 58 further comprising a step of mixing the provided antibody with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

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60. The method of claim 58 further comprising a step of administering a booster dose of the provided antibody,
following the administering step.

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61. A specific binding protein which specifically binds to an isolated and purified peptide comprising cysteine-blank-blank-proline-histidine-blank-blank-blank-cysteine, where ^{SEQ ID NO: 6}
blank is any amino acid.

62. The specific binding protein of claim 61 which is an antibody.

63. The specific binding protein of claim 62 which is a monoclonal antibody.

64. An antibody of claim 62 which is raised to an isolated and purified peptide comprising cysteine-blank-blank-
5 proline-histidine-blank-blank-blank-cysteine ^(SEQ ID NO:6) where blank is any amino acid.

65. A method for treatment or prophylaxis for canine 10 allergy, said method comprising:

providing a specific binding protein in accordance with claim 61; and,

administering the provided binding protein to a dog.

15 66. The method of claim 65 further comprising a step of mixing the provided binding protein with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the binding protein and the diluent.

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67. The method of claim 65 further comprising a step of administering a booster dose of the provided binding protein, following the administering step.

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68. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which comprises Cys-Pro-Asn-Pro-His-Ile-Pro-Met-Cys ^(SEQ ID NO:16) or a conservative variant thereof.

a *Abn CS*

69. The antibody of claim 68 wherein the amino acid sequence comprises Ser-Val-Thr-Leu-Cys-Pro-Asn-Pro-His-Ile-Pro-Met-Cys-Gly-Gly-Gly *(SEQ ID NO.7)*

5 70. The antibody of claim 68 that binds to a defined epitope.

71. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim

10 70.

72. A method for treatment or prophylaxis for canine allergy, said method comprising:

15 providing an antibody in accordance with claim 68; and,

administering the provided binding protein to a dog.

73. The method of claim 72 further comprising a step of mixing the provided antibody with a diluent prior to the 20 administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

74. The method of claim 72 further comprising a step of 25 administering a booster dose of the provided antibody, following the administering step.

75. An antibody which is raised to an isolated and purified peptide comprising an amino acid sequence which

a comprises Cys-Pro-Asn-Pro-His-Asn-Pro-Tyr-Cys or a conservative variant thereof.

76. The antibody of claim 75 wherein the amino acid sequence comprises Ser-Ala-Cys-Pro-Asn-Pro-His-Asn-Pro-Tyr-Cys-Gly-Gly-Gly.
a
(Seq ID NO:8)

77. The antibody of claim 75 that binds to a defined epitope.

10 78. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 77.

15 79. A method for treatment or prophylaxis for canine allergy, said method comprising:

B and,
providing an antibody in accordance with claim 75
administering the provided binding protein to a dog.

20 80. The method of claim 79 further comprising a step of mixing the provided antibody with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the antibody and the diluent.

25 81. The method of claim 79 further comprising a step of administering a booster dose of the provided antibody, following the administering step.

82. A monoclonal antibody which is 15A.2.

83. The monoclonal antibody of claim 82 that specifically binds to a defined epitope.

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84. A recombinant binding molecule which specifically binds to the defined epitope bound by the antibody of claim 83.

10 85. A method for treatment or prophylaxis for canine allergy, said method comprising:

providing the monoclonal antibody of claim 82 and, administering the provided monoclonal antibody to a dog.

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86. The method of claim 85 further comprising a step of mixing the provided monoclonal antibody with a diluent prior to the administering step, and wherein the administering step comprises administering the mixture of the monoclonal antibody and the diluent.

20 87. The method of claim 85 further comprising a step of administering a booster dose of the provided monoclonal antibody, following the administering step.

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